

### **ABSTRACT**

A gas processing plant has a de-ethanizer and a refluxed absorber, wherein the absorber operates at higher pressure than the de-ethanizer, and wherein at least a portion of the absorber bottoms product is expanded to provide cooling for the absorber reflux stream and/or the 5 distillation column feed stream. Especially contemplated gas processing plants include propane and ethane recovery plants, and where the gas processing plant is an ethane recovery plant, it is contemplated that the ethane product comprises no more than 500ppm carbon dioxide.